

Advancements in immunotherapy for glomerulonephritis: Promising treatments on the horizon

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Madam, Over the years, glomerulonephritis management has been predominantly reliant on corticosteroids and immunosuppressive agents. However, emerging research on targeted immunotherapies, such as biologics and monoclonal antibodies, has shown remarkable potential in halting the disease progression and promoting remission in certain glomerular disorders.¹ Glomerulonephritis, characterised by the inflammation of glomeruli, poses a significant burden on the health system of low-income countries. A study revealed that glomerulonephritis is the most common cause of end-stage renal disease in developing countries, and it affects at least 21% of the adult population in Pakistan.² The emergence of novel immunotherapeutic approaches may revolutionise treatment outcomes, offering new hopes for patients suffering from this complex and challenging kidney disorder in Pakistan.

An extensive study assessed the role of Belimumab, a B-lymphocyte stimulator (BLyS) inhibitor, in patients with lupus nephritis. The monoclonal antibody, Belimumab showed promising outcomes in patients with lupus.³ Another recent study revealed that rituximab, a monoclonal antibody to CD20 can be used for patients suffering from ANCA Glomerulonephritis or also in patients with steroid resistance.⁴ These findings demonstrated a substantial reduction in proteinuria and in increased remission rates following rituximab therapy, highlighting its potential as a promising treatment option. According to a current study, dealing with glomerulonephritis in low-resource setting areas in Pakistan is very challenging as it's only limited to tertiary care hospitals.⁵

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As the landscape of glomerulonephritis management evolves, it is crucial to encourage further research and clinical trials to establish immunotherapies' long-term efficacy and safety. Collaborative efforts among nephrologists, researchers, and pharmaceutical companies can drive the development of personalized treatment strategies, optimising patient care and outcomes. In conclusion, immunotherapy for glomerulonephritis holds immense promise, with encouraging results emerging from research conducted in Pakistan and around the globe. The government should build some nephrology centres in areas devoid of tertiary settings so the patients can be treated on time. As we move toward an era of precision medicine, harnessing the potential of immunotherapeutic agents in glomerulonephritis treatment represents a beacon of hope for patients seeking effective and targeted therapies.

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References

1. Trimarchi H, Barratt J, Cattran DC, Cook HT, Coppo R, Haas M, et al. Oxford Classification of IgA nephropathy 2016: an update from the IgA Nephropathy Classification Working Group. *Kidney Int* 2017;91:1014-21. doi: 10.1016/j.kint.2017.02.003.
2. Rafique Z, Sadaf S, Batool S, Javeed S, Chughtai AS, Atiq A. Morphological Spectrum of Glomerulonephritis in Medical Renal Biopsies: A Single-Center Study. *Cureus* 2022;14:e22579. doi: 10.7759/cureus.22579
3. Shrestha S, Budhathoki P, Adhikari Y, Marasini A, Bhandari S, Mir WAY, et al. Belimumab in Lupus Nephritis: A Systematic Review and Meta-Analysis. *Cureus* 2021;13:e20440. doi: 10.7759/cureus.20440
4. Anders HJ, Kitching AR, Leung N, Romagnani P. Glomerulonephritis: immunopathogenesis and immunotherapy. *Nat Rev Immunol* 2023;23:453-71. doi: 10.1038/s41577-022-00816-y
5. Moorani KN, Aziz M, Amanullah F. Rapidly progressive glomerulonephritis in children. *Pak J Med Sci* 2022;38:417-25. doi: 10.12669/pjms.38.ICON-2022.5774.

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MBM: Design, analysis, drafting, revision, final approval, accountable for all aspects of the work.

HZ: Data interpretation, revision, drafting, final approval, accountable for all aspects of the work.